

Response to Office Action mailed December 14, 2007

Serial No. 10/595,046; filed June 9, 2006

Inventors: Berger et al.

Art Unit: 3721

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Listing of the claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously Presented) A handheld working tool, comprising:

- a first unit excited by vibration during operation,
- a second unit that is capable of being moved at least in a working direction (A) relative to the first unit, and
- a vibration isolation device situated effectively between the first unit and the second unit, the vibration isolating device having at least one actuator for producing an actuating force with which an operating force acting in the working direction (A) between the first unit and the second unit is able to be at least partly compensated, and the actuator being pneumatically operated, wherein- the actuator has a handle air spring whose filling with compressed air is able to be modified, and wherein
- a spring device is situated parallel to the actuator, between the first unit and the second unit.

2. (Previously Presented) A handheld working tool, comprising:

- a first unit excited by vibration during operation,
- a second unit that is capable of being moved at least in a working direction (A) relative to the first unit, and
- a vibration isolation device situated effectively between the first unit and the second unit, the vibration isolating device having at least one actuator for producing an actuating force with which an operating force acting in the working direction (A) between the first unit and the second unit is able to be at least partly compensated, and the actuator being pneumatically operated, wherein- the actuator has a handle air spring whose filling with compressed air is able to be modified, and wherein
- the vibration isolation is effected predominantly by the handle air spring.

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3. (Currently Amended) ~~A working tool according to Claim 1,~~ A handheld working tool, comprising:

- a first unit excited by vibration during operation,
- a second unit that is capable of being moved at least in a working direction (A) relative to the first unit, and
- a vibration isolation device situated effectively between the first unit and the second unit, the vibration isolating device having at least one actuator for producing an actuating force with which an operating force acting in the working direction (A) between the first unit and the second unit is able to be at least partly compensated, and the actuator being pneumatically operated, wherein- the actuator has a handle air spring whose filling with compressed air is able to be modified, and wherein
- a spring device is situated parallel to the actuator, between the first unit and the second unit, wherein
- the working tool is a drilling and/or impact hammer,
- the second unit has a handle,
- in the first unit there is provided a pneumatic spring hammer mechanism having a drive piston driven by a motor for driving an impact piston ~~by means of~~ via an air spring that is able to be produced between the drive piston and the impact piston, and wherein
- the drive piston is fashioned for the production of compressed air for supplying the actuator.

4. (Previously Presented) The working tool according to Claim 3, wherein the actuator has a compressed air storage device that is able to be filled with compressed air by the drive piston.

5. (Previously Presented) The working tool according to Claim 4, wherein

- the actuator has the compressed air storage device, a valve device, the handle air spring, and a handle piston,

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- the compressed air storage device is able to be connected to the handle air spring via the valve device, and wherein
- the handle air spring acts on the handle piston that is connected to the handle.

6. (Previously Presented) The working tool according to Claim 5, wherein the valve device is fashioned such that, when the handle piston reduces a volume enclosing the handle air spring beyond a predetermined value, compressed air is able to be supplied to the handle air spring from the compressed air storage device in order to restore the predetermined value for the volume of the handle air spring.

7. (Previously Presented) The working tool according to Claim 5, wherein the valve device has an outlet valve for letting compressed air out of the handle air spring when the volume of the handle air spring exceeds a predetermined maximum value due to a displacement of the handle piston.

8. (Previously Presented) The working tool according to Claim 1, wherein a sensor is provided for determining the relative position of the first unit and the second unit.

9. (Currently Amended) ~~The working tool according to Claim 8,~~ A handheld working tool, comprising:

- a first unit excited by vibration during operation,
- a second unit that is capable of being moved at least in a working direction (A) relative to the first unit, and
- a vibration isolation device situated effectively between the first unit and the second unit, the vibration isolating device having at least one actuator for producing an actuating force with which an operating force acting in the working direction (A) between the first unit and the second unit is able to be at least partly compensated, and the actuator being pneumatically operated,

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wherein- the actuator has a handle air spring whose filling with compressed air is able to be modified, and wherein

- a spring device is situated parallel to the actuator, between the first unit and the second unit, wherein a sensor is provided for determining the relative position of the first unit and the second unit, and wherein

- the sensor and the a valve device are connected to a control unit, and in that

- the valve device is able to be controlled by the control unit in such a way that in the handle air spring a compressed air state prevails such that the relative positions, acquired by the sensor, of the first unit and the second unit are kept in a predetermined range of fluctuation.

10. (Previously Presented) The working tool according to Claim 1, wherein the spring device has a softer spring characteristic than the actuator.

11. (Previously Presented) The working tool according to Claim 1, wherein the spring device has a spring rigidity that is at least great enough that the spring device is able to absorb the movement of an amplitude of the vibration without a bottoming out of the spring device.

12. (Previously Presented) The working tool according to Claim 2, wherein the actuating force produced by the actuator is able to be modified cyclically, the modification taking place with the same frequency with which the drive piston moves.

13. (Previously Presented) The working tool according to Claim 1, wherein a maximum actuating frequency of the actuator is smaller than a frequency of the vibration produced in the first unit.

14. (Currently Amended) ~~The working tool according to Claim 1,~~ A handheld working tool, comprising:

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- a first unit excited by vibration during operation,
- a second unit that is capable of being moved at least in a working direction (A) relative to the first unit, and
- a vibration isolation device situated effectively between the first unit and the second unit,
the vibration isolating device having at least one actuator for producing an actuating force with
which an operating force acting in the working direction (A) between the first unit and the second
unit is able to be at least partly compensated, and the actuator being pneumatically operated,
wherein- the actuator has a handle air spring whose filling with compressed air is able to be
modified, and wherein
- a spring device is situated parallel to the actuator, between the first unit and the second unit,
wherein an air pressure-producing device, driven by a motor of the working tool, is provided in order to produce compressed air for the actuator.

15. (Previously Presented) The working tool according to Claim 1, wherein the actuating force of the actuator is able to be set in such a way that a fluctuation range is ensured for the relative positions, caused by different operating forces, between the first unit and the second unit that is smaller than a fluctuation range that the relative positions between the first unit and the second unit would achieve given operating forces differing in the same way but without the compensating effect of the actuating force of the actuator.

16-36. (Cancelled)

37. (New) A handheld working tool, comprising:

- a first unit excited by vibration during operation,
- a second unit that is capable of being moved at least in a working direction (A) relative to the first unit, and

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- a pneumatic vibration isolation device situated effectively between the first unit and the second unit and having a pneumatic spring defining a preload value and a length thereof, wherein the preload value of the pneumatic spring is variable for maintaining the length of pneumatic spring at a generally constant value, thereby reducing transmission of vibrations between the first and second units.